United States Environmental Protection Agency | Prevention, Pesticides And Toxic Substances (7508C) | EPA-738-F-98-022 December 1998

R.E.D. FACTS

Hydramethylnon

Pesticide Reregistration

All pesticides sold or distributed in the United States must be registered by EPA, based on scientific studies showing that they can be used without posing unreasonable risks to people or the environment. Because of advances in scientific knowledge, the law requires that pesticides which were first registered before November 1, 1984, be reregistered to ensure that they meet today's more stringent standards.

In evaluating pesticides for reregistration, EPA obtains and reviews a complete set of studies from pesticide producers, describing the human health and environmental effects of each pesticide. To implement provisions of the Food Quality Protection Act (FQPA) of 1996, EPA considers the special sensitivity of infants and children to pesticides, as well as aggregate exposure of the public to pesticide residues from all sources, and the cumulative effects of pesticides and other compounds with common mechanisms of toxicity. The Agency develops any mitigation measures or regulatory controls needed to effectively reduce each pesticide's risks. EPA then reregisters pesticides that meet the safety standard of the FQPA and can be used without posing unreasonable risks to human health or the environment.

When a pesticide is eligible for reregistration, EPA explains the basis for its decision in a Reregistration Eligibility Decision (RED) document. This fact sheet summarizes the information in the RED document for reregistration case 2585, hydramethylnon.

Use Profile

Hydramethylnon is an insecticide used to control ants, cockroaches, crickets, and termites. There are 28 end use product formulations that are either granular baits or ready-to-use gelatin. The use on rangelands or pastures primarily for Imported Fire ant control, is considered to be a food use and established tolerances are cited in 40 CFR Section 180.395. Hydramethylnon completely metabolizes within the body of foraging ruminants so there is an exemption from the requirement of a tolerance for meat, milk, and meat byproducts.

Regulatory

Hydramethylnon was first registered as a pesticide in the U.S. in 1980.

History

As part of the reregistration process the Agency issued Data Call-Ins (DCI) for data needed to support the continued registration of hydramethylnon products. These DCIs required environmental fate, ecological effects, and toxicological data. In addition, data to support the agricultural and residential grass use were requested.

Human Health Assessment

Toxicity

In studies using laboratory animals, hydramethylnon generally has been shown to be of low acute toxicity. It has been placed in Toxicity Category III for effects via the oral route of exposure and eye irritation, and Toxicity Category IV for the dermal and inhalation routes. The Cancer Peer Review Committee determined that hydramethylnon should be classified as a Group C carcinogen, a possible human carcinogen, based upon statistically significant lung adenomas and carcinomas.

Dietary Exposure

People are not likely to be exposed to residues of hydramethylnon either through their diet or drinking water. There are tolerances for grass orage and hay by grazing and foraging cattle but there are no food or feed residues and groundwater contamination from hydramethylnon is unlikely.

Occupational Exposure

Workers are most likely to be exposed to hydramethylnon by application of the ready-to-use gelatins to kitchen counter tops but these exposures are minimal. EPA is generally not concerned with occupational risk if MOEs (margins of exposures) are greater than 100.

Other Considerations

Because hydramethylnon is considered a food use the specific determinations outlined in FQPA were taken into consideration. Contact by infants or children with the ready-to-use gelatin product from food preparaton counter top is unlikely and exposure from drinking water is not expected.

The Agency has not made a determination whether hydramethylnon and any other pesticide have a common mechanism of toxicity that would require a cumulative risk assessment. For the purposes of this RED, EPA has considered only the risks from hydramethylnon. If required, cumulative risks will be assessed when methodologies for determining common mechanism of toxicity and for performing cumulative risk assessments are finalized.

Environmental Assessment

Environmental Fate

For the currently registered uses of hydramethylnon, the Agency typically requires an abbreviated set of environmental fate data on hydrolysis, metabolism, and mobility.

Based on existing data, hydramethylnon is likely to be moderately persistent to persistent and relatively immobile in terrestrial environments.

Hydramethylnon is stable to abiotic hydrolysis and photodegradation on soil. It does not exhibit fate and transport characteristics similar to chemicals that are known to leach to groundwater.

Ecological Effects/Risk

Calculated acute avian risks do not exceed the Level of Concern (LOC). The Agency concludes that the overall acute impact on freshwater and terrestrial non-target organisms from the use of hydramethylnon for insect control will be minimal. The Agency is requiring an avian reproduction study for confirmatory purposes.

Risk Mitigation

The Agency is requiring the use of water resistant gloves and a 12 hour re-entry interval. The Agency is also establishing the minimum Worker Protection Standard (WPS) Personal Protective Equipment (PPE) of coveralls, water-resistant gloves, shoes and socks for early re-entry.

Additional Data Required

EPA is requiring product-specific data including product chemistry and acute toxicity studies, and revised labeling for reregistration. Some additional ecological effects and environmental fate data are being required for confirmatory purposes.

Product Labeling Changes Required

All hydramethylnon end-use products must comply with EPA's current pesticide product labeling requirements and the water resistant glove requirement, the 12 hour restricted entry interval, the early entry PPE requirements and the user safety recommendations below. The following labeling changes are required.

User Safety Recommendations

- "Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet."
- "Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing."
- "Users should remove protective clothing and equipment immediately after handling this product. Wash the outside of gloves before removing. Keep and wash protective clothing and equipment separately from other laundry."

Regulatory Conclusion

The use of currently registered products containing hydramethylnon in accordance with changes specified in this document will not pose unreasonable risks of adverse effects to humans or the environment. Therefore, all uses of these products are eligible for reregistration.

Hydramethylnon products will be reregistered once the required product-specific data, required confirmatory generic data, product specific data, confidential statements for formula, and revised labeling are received and accepted by EPA.

For More Information

EPA is requesting public comments on the RED document for hydramethylnon during a 60-day time period, as announced in a Notice of Availability published in the Federal Register. To obtain a copy of the RED document or to submit written comments, please contact the Pesticide Docket, Public Information and Records Integrity Branch, Information Resources and Services Division (7502C), Office of Pesticide Programs (OPP), US EPA, Washington, DC 20460, telephone (703) 305-5805.

Electronic copies of the RED and this fact sheet are available on the Internet. See http://www.epa.gov/REDs.

Printed copies of the RED and Fact Sheet can be obtained from EPA's National Center for Environmental Publications and Information (EPA/NCEPI), P.O. Box 42419, Cincinnati, OH 45242-2419, telephone at 1-(800) 490-9198; fax (513) 489-8695.

Following the comment period, the hydramethylnon RED document also will be available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161; telephone at (703) 605-6000 or 1-(800) 553-6847.

For more information about EPA's pesticide reregistration program, the hydramethylnon RED, or reregistration of individual products containing hydramethylnon, please contact the Special Review and Reregistration Division (7508), OPP, US EPA, Washington, DC 20460, telephone at (703) 308-8000.

For information about the health effects of pesticides, or for assistance in recognizing and managing pesticide poisoning symptoms, please contact the National Pesticides Telecommunications Network (NPTN). Call toll-free 1-(800) 858-7378, from 6:30 am to 4:30 pm Pacific Time, or 9:30 am to 7:30 pm Eastern Standard Time, Monday through Saturday. Their internet address is: ace.orst.edu/info/nptn/.